Butterfly & Other Invertebrates Club INC. Newsletter

ISSUE NO: 9 DATE: JUNE, 1998 ISSN: 1236-0006

Office Bearers 1997

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Contact Address

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Aims of Organisation

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organise excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

Newsletter Deadlines

If you want to submit an item for publication the following deadlines apply:

March issue - January 21st; June issue - April 21st;
September issue - July 21st; December issue - October 21st

Committee Meetings

A quarterly meeting is now being scheduled in order to plan club activities and the newsletter. The next meeting is being held on Thursday August 6th 1998 at Rob MacSloy's place. Phone Rob for directions.

EDITORIAL

We've made it to 9 issues, at ± 4 per year! Thanks goes to the hard work especially Daphne puts into compiling the newsletter and following people up for their articles. Thanks also goes to all who contribute.

Which brings me to the subject of contributing. Our intention in setting up this newsletter was to complement publications and newsletters produced by other organisations, many of whom have a scientific or professional charter. We hope you find our newsletter friendly, accessible and conversational in style, though accurate in the observation of facts about butterflies and other invertebrates. If errors do occur we hope you will let us know, for example, by way of letter or email, so that the information can be corrected in subsequent issues.

We encourage the contributions of everyone, no matter what your level of scientific expertise. Take, for example, the Creature Feature on the Common Aeroplane. It was because of Bob Miller's enthusiasm for butterflies, and his interest in these creatures, that he has been the first to report osmeteria in Common Aeroplane larvae, and subsequently another species. Non-scientifically trained enthusiasts and amateurs have much to contribute to this field, especially in making it more popular, and through our newsletter we hope to make this information available to a wide audience.

Helen Schwencke

IN THIS ISSUE

Excursion to Nudgee Beach Reserve and Boondall Wetlands on 21st March, 1998.

A day typical of our hot and humid summer greeted the members who attended our excursion to Nudgee Beach.

We first visited the Nudgee Beach Environmental Education Centre and after ascertaining that we wouldn't need to "jump the fence" proceeded to examine the plots of rainforest species which had been planted there. With such a variety of available host plants it was not surprising to find a wide range of butterflies.

The highlights among the following were probably the Common Aeroplane (*Phaedyma sherpherdi*) patrolling a sunny corner and the number of Blues (*Lycaenids*) engaging in "dog fights" above the trees:

Common Grass Blue (*Zizinia labradus*)
Six Line Blue (*Nacaduba berenice*)
Small Green Banded Blue (*Psychonotis caelius*)
Zebra Blue (*(Leptotes plinius*)
White Line Blue (*Nacaduba kurava)*

Common Grass Blue

Small Green Banded Blue

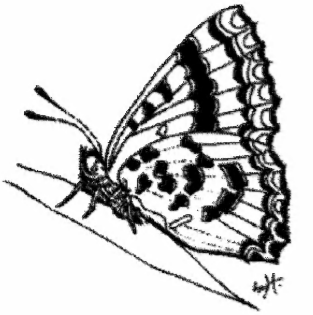
Common Crow *(Euploea core*)
Wanderer (*Danaus plexippus*)
Lesser wanderer (*Danaus chrysippus*)
Blue Tiger (*Tiramala hamata*)
Glasswing (*Acraea andromacha*)
Common Jezabel (*Delias nigrina)*
Common Aeroplane (*Phaedyma shepherdi*)
Lemon Migrant (*Catopsilia pomona*)
Pale Green Triangle (*Graphium eurypylus*)
Orchard Swallowtail (*Papilio aegeus*)

Common Jezabel

Wanderer

We then moved on to the Mangrove Boardwalk for a very humid walk around the circuit. Very little was evident but there were good numbers of the tiny Saltpan Blue (*Theclinesthes sulpitius*). The host plant of the Black and White Tiger (*Danaus affinis*) *Cynanchum (ischnostemma) carnosum* – was much in evidence but no sign was seen of the butterfly or its larva. (There was one seen later (reputedly) at the Boondall Wetlands.)

Despite finding likely sites for Illidge's Ant Blue (*Acrodipsas illidgei*) including the right species of ant, no sign of the butterflies themselves were found.



Illidge's Ant Blue

We stopped for a "cuppa" after the walk and despite it being close to the end of the season several different cicadas were heard calling including *Psaltoda claripennis, Psaltoda harrisii* (Yellowbelly), *Arunta perulata* (White Drummer) *Cicadetta hackeri* (Paperbark Cicada) and *Pauropsalta actites.*

While some members then left for their trip home a few of us drove round to Boondall Wetlands to look for suitable habitat for the Australian Fritillary (*Argyreus hyperbius*). A very thick cover of grass(es) made the search for the Arrowhead Violet (*Viola betonicifolia*) very difficult and in what would appear to be an ideal location no plants were found.

By then it was getting late in the day and the only butterfly activity was from Evening Browns (*Melanitis leda*).

All in all, a most pleasant afternoon.

Rob MacSloy
May 1998

REPORTS

The following is a report on a talk on Stingless Bees presented to the March Meeting of the Club by Dr Tim Heard.

There are 20,000 species of bees in the world with 1,600 being native to Australia. Known to Aborigines as the "sugarbag", the stingless bees (*Trigona* and *Austroplebeia* species) are the only species of native bees that are social and store pollen and honey (basically dehydrated nectar). The other species are solitary and use what nectar they collect immediately for food for themselves or for preparing provisions for a brood cell. They are encountered in tropical and subtropical parts of Australia. There are about 14 species known to Australia although this may change as it is difficult to distinguish it from other native bees as they are all similar in appearance. They are about 4 mm long, with a black body covered in microscopic hairs. They have enlarged areas on their hind legs for carrying pollen and resin.

Like Honey Bees *(Apis mellifera)*, the stingless bees are important pollinators for many species of flowering plants. The major differences between them relate to their nest architecture and propagation, and the way they communicate food sources to fellow workers.

The structure of the nest of the stingless bee is complex and unique. The inner sanctum of the nest consists of a brood chamber, a grouping of cells containing the immature bees, surrounded by an insulating waxen envelope. Unlike Honey Bees, which continually feed their larvae, larvae of stingless bees are mass provisioned. Each brood cell is stocked almost to the brim with honey, pollen and glandular secretions, an egg is laid in the cell by the queen and then the cell is closed. Complete larval and pupal development occurs in the closed cell. When the adult bee emerges from the cell, the cell is destroyed. It is thus used only once, unlike Honey Bees cells which are used many times. Surrounding the brood chamber are large egg-shaped pots of honey and pollen.

Honey Bees use pure wax for comb construction whereas the stingless bee uses a material called cerumen, formed by mixing beeswax (a glandular secretion of worker bees) with propolis (resins of plant origin). To establish a new nest, Honey Bees form a dense swarm of worker bees (known as a reproductive swarm) leave the nest with the old queen leaving developing, immature queens in the parent nest. Stingless bee queens, however, are not transferred until the new nest has been fully prepared by workers, and it is the new queen that makes the flight leaving the old queen in the parent nest.

Drones also swarm while waiting for the opportunity to mate with a new queen. These mating swarms occur around the old and new nests at the time the new queen makes her move. Mating usually takes place soon after the young queen has arrived at the new nest when she goes on a mating (nuptial) flight. Mating swarms also occur at established nests probably when the old queen has died and is being replaced by a young unmated one.

All Australian species nest in hollow trunks and branches of trees or in rock crevices. You can sometimes also find them in wall cavities, and some unusual places such as garbage bins and water meters. Nests can, with care, be relocated to wooden hives. It is a good idea to be on the lookout when natural areas are being cleared for development and rescue hives from subsequent destruction. Look for a small opening, surrounded by resin, in a tree cavity.

The honey produced is more liquid and acidic than that of the Honey Bee. It is aromatic from the plant resins used to build the pots in which the honey is stored. A strong hive of Honey Bees can produce 75 litres of honey a year whereas stingless bees produce about 1 litre. It is also difficult to rob the hive so it is probably for their use as pollinators that the stingless bee is useful. Stingless bees are thought to be important pollinators of many Australian native plants and also many of the new fruits, nuts, spices, vegetables and oil seeds gaining popularity in Australia. They are proven pollinators of macadamias, which benefit from cross-pollination. Huge numbers of worker bees, however, are needed to pollinate large orchards.

Tim Heard
May '98

CREATURE FEATURE

Secrets of the Common Aeroplane (*Phaedyma shepherdi*)

It would be easy to dismiss the Common aeroplane as just another one of those black and white butterflies. Apart from its unusual gliding flight pattern, it is easy to confuse with the Common Crow. Many people may have seen it without realising it.

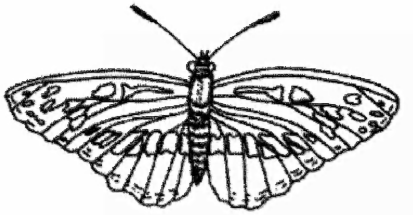
However, this confusion may not be accidental. The Common crow is distasteful to birds and this similarity may also provide protection to the Common aeroplane. Interestingly, the mimicry is not total because, in the right light and at the right angle, a bluish-green irridescence is visible across the forewing.

Although it has often visited my backyard and I grow several of its host plants I have never found it breeding here. It is most often found breeding close to creeks or rivers, and since some of its host plants are common, it is able to be quite choosy about where it breeds. It is also vulnerable to attack by parasites. Many caterpillars I have found in the wild had been parasitized by Tachinid flies.

When it is resting the caterpillar looks a bit like a Scotch terrier, and it is easy to find once you are acquainted with its special camouflage trick. It chews the ends of leaves to produce a ragged effect and hides amongst the bits of dead leaf. Against this background it is difficult to see, but the unusual pattern in which the leaves are chewed easily give away its presence.

The caterpillars have a secret weapon for defence located between the mandibles (mouth parts) and the first set of forelegs – a scent producing osmeterium. Club

member, Bob Miller was the first to report this unexpected structure (see Creature Note #9 in this issue). This short yellowish organ is normally hidden away until the caterpillar is disturbed. Osmeteria are usually found amongst the swallowtail butterflies. Bob has since found that the Tailed Emperor (*Polyura pyrrhus*) caterpillar also has one.



Common Aeroplane

The butterfly is sometimes found resting on the leaf litter of the forestfloor. Once I managed to get very close to one of these and found that it was extruding its proboscis up and down onto some bits of leaf litter. Those bits touched by the proboscis became darker as they were moistened by the action. I don't know what the purpose of this activity is.

Host plants of this butterfly are trees such as the *Pongamia pinnata, Mucuna gigantea, Apananthe philippinensis*, the flame tree (*Brachychiton acerifolium), Celtis philippensis*, and the introduced *Celtis sinensis*.

Frank Jordan
May '98

CREATURE NOTES

Creature Note #8
Australian Planes (*Bindahara phocides yurgama*) at the Cape

A lifetime of observing nature is bound to hold some especially memorable moments. My comprehensive diaries of trips away serve as useful "memory joggers".

Many years ago my late husband, Ron, my son David, and I were privileged to accompany other members of the Queensland Naturalists' Club on a long excursion to Cape Tribulation, about 100 kms north of Cairns. The following is an extract from that particular diary.

Australian Plane

"26 September..... A walk to the beach revealed the creeper *Salacia chinensis*, covered with round, red fruits. These were of particular interest to us and the fruit contained the larvae of a most beautiful and rare little butterfly, the Australian Plane (*Bindahara phocides yurgama*).

We took a small number back to our cabin for observation. Three days later ..... "Larvae of the Australian Plane butterfly are leaving the *Salacia* fruits to pupate." In actual fact they also ate holes in their container, and took some finding amongst our luggage!

I returned to the beach and observed that old weathered wood close to the base of the *Salacia* vine was pitted with countless holes, in which generations of *Bindahara* had pupated over many years. A piece of weathered wood was made available to the larvae and they immediately made themselves at home, in preparation for a successful pupation. They emerged in 20-28 days, the last one emerging on 28 October. This habit had only previously been recorded in Sri Lanka. (Common and Waterhouse, 1981).

Lorna Johnston
8 May, 1998

Creature Note # 9

Osmeterium-type projection found on the larvae of *Phaedyma shepherdi* (Common Aeroplane)

Whilst moving several larvae of *Phaedyma sherpherdi* from one set of food plants to another in a breeding facility, I noticed a slightly pungent smell. Upon closer inspection and quite a bit of poking and prodding, I noticed a fleshy protuberance coming and going from the underside of some of the larvae.

This protuberance, looking not unlike that of a telescope expanding and contracting, was positioned below and towards the front-end of the larvae and was obviously the source of the scent. Upon inquiries to Michael Braby, C.S.I.R.O. Department of Entomology, Canberra, this has never before been noticed in any members of the family – Nymphalidae.

Osmeteriums, being defence structures, have only been found in larvae of Papilionidae previously.

Hopefully this will be recognised as a valid observation by one of our B.O.I.C. members.

Bob Miller
May 1998

LETTERS

The following letter was received from Max Moulds in Sydney.

Congratulations on your new club which John Moss detailed to me when he visited at the Australian Museum in Sydney recently. I see from the back numbers of your excellent newsletter, that you kindly sent me, that you are already two years old! I believe you're producing a butterfly poster and undertaking a butterfly recovery program – good luck with these.

As you may already know my interests include the study of cicadas, and hawkmoths and their host-plants, and I am pleased to hear that your library has a copy of my cicada book. As you can see many people contributed information for the book including one of your club members (John Moss). I am always interested in receiving any information on insects and especially anything on the hawkmoths and their hostplants for a new book I am writing.

My position at the Museum is as the Entomology Department Collection Manager, but I still get time for occasional field trips. Currently I am undertaking research into the higher taxonomy of cicadas, having recently completed my Masters with a revision of the taxonomy of an endemic group of cicadas.

John tells me that you are always after articles for your newsletter – although I can't think of anything relevant at the moment, when time permits I will put pen to paper. Meanwhile keep up the good work with your projects and enjoy your excursions and informative meetings. Thank you once again for the membership and back copies.

Max Moulds
June 1998

We have received the following letter requesting information from Myron Zalucki

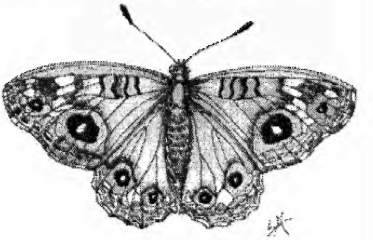
Have you ever seen and recorded migrating butterflies?

We are developing a study of the patterns of migration of Australian Butterflies in relation to climate and other seasonal variables. Although there are quite a few published accounts we are sure there are unpublished records in people's notebooks.

We are keen to obtain any records of numbers flying, location, direction of flight and if available local conditions at the time. With the observers permission we would plot the sightings on maps of Australia and put them on the departments web site. That way you can all see the bigger picture and greatly help our understanding of butterfly migration. Your record would of course be acknowledged.

We are particularly interested in the species listed below, but records for other species are more than welcome:

Brown Awl (*Badamia exclamationis*); Caper White (*Anaphaeis java teutonia*); Common Albatross (*Appias paulina ega);* Lemon Migrant (*Catopsilia pomona pomona);* Common Grass Blue (*Zizina labradus*) Common Eggfly (*Hypolimnas bolina nerina*); Danaid Eggfly (*Hypolimnas missipus)* Meadow Argus (*Junonia villida calybe);Aust. Painted Lady (Vanessa kershawi*) Aust. Admiral (*Vanessa itea*); Chequered Swallowtail (*Papilio demoleus sthenelus)* Black and White Tiger (*Danaus affinis affinis);* Blue Tiger (*Tirumala hamata)* Common Aust. Crow (*Euploea core corinna*); Two brand Crow (*Euploea sylvester sylvester*);
Eastern Brown Crow (*Euploea tulliolus tulliolus*);Wanderer (*Danaus Plexippus*); Lesser Wanderer (*Danaus chrysippus*)



Meadow Argus

If you can help in any way please contact:

Myron P. Zalucki ph: 07-3365 2194
Department of Entomology fax: 07-3365 2219
The University of Queensland Email: M.Zalucki@mailbox.uq.edu.au

Sample Proforma, with notes on completing. Please note incomplete records are better than no-record.

Species Location Number Direction Time of day Wind direction Notes

Use speceis Name or unambiguous common name prefer lat long Either Total seen or number per unit time of flight or extinction angle as compass bearing or angle (North =0) include date(s) and wind strength (if available) at the time of recording Temperature, notes on behaviour eg feeding
eg Danaus plexippus Gosford
33.26s 151.21e 10 over the day or 15 per hour SSE or
200 0900 to 1300 23 April 1967 Light breeze from the South 20, Some adults stopped to feed on flowering Eucalypts

For details of the next Australasian Applied Entomology Conference(29th September to 2nd October 1998) visit the Home Page at
http://www.ctpm.uq.edu.au/Education/AppliedEnto.html
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The University of Queensland Ph: (617)-33652194
Brisbane, Australia, 4072 Fax: (617)-33651922
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WWW:http://www.uq.edu.au/entomology/home.html
http://www.ctpm.uq.edu.au/Programs/Modelling.html

We've had another letter from Lois Hughes (gosh we've missed you Lois)

"Well, folks, its been a long time since the plan to produce a poster was born. I thought you might like a progress report. I'm very pleased to tell you that nine of the ten host plant paintings have been completed. It has been an enormously challenging project, much more involved than either Helen or myself envisaged. But with each problem resolved satisfactorily we are now much closer to completion. The next step involves the graphics technicians and then its off to the printers. I'm really looking forward to seeing the finished product.

Lois Hughes

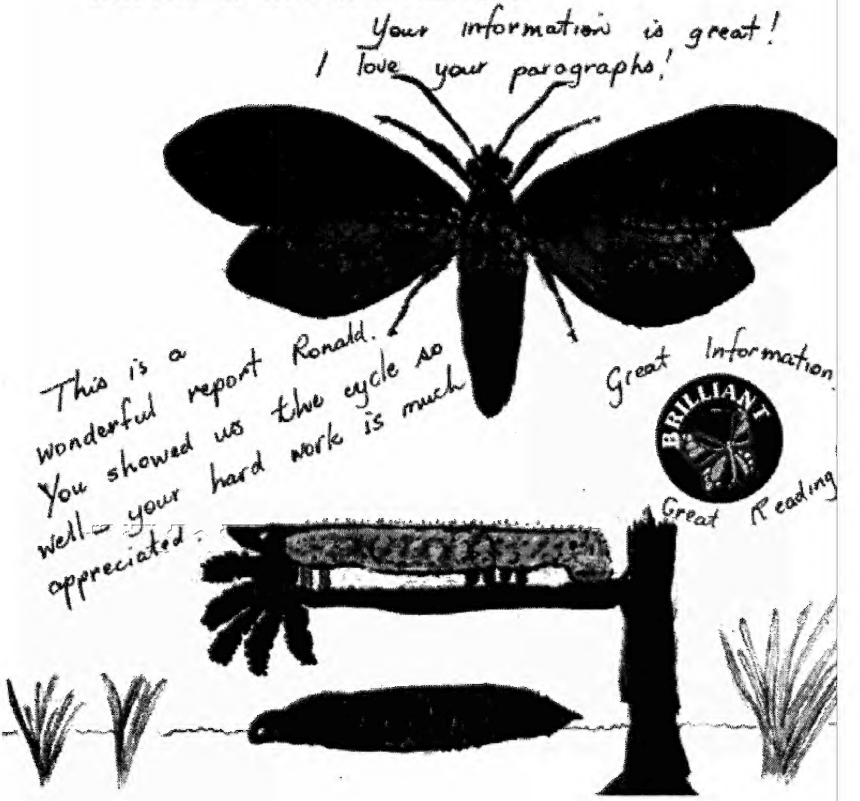
THE STORY OF THE REMARKABLE DOUBLE-HEADED HAWK MOTH.

by Ronald Moss.

Scientific name *Coequosa triangularis*.
This is the largest hawk moth in Australia. It has a wing span of 14 centimetres. It lives on the east coast and tablelands of NSW. and southern Queensland. The larva is a large green caterpillar with a rough skin and two raised shining black eye-like spots on its tail end. This appears to look like a second but much larger head, with which it can scare birds and animals that might try to eat it. That is why it has been given its strange name.

It feeds on Banksia, Geebungs, Macadamias and Grevilleas. During the day it holds on to the stem of the food-plant with its legs and large anal claspers and pretends to be a leaf. When disturbed it raises its tail end and shows its false head and eyes.

When it reaches about 11 centimetres long it crawls down the tree and burrows under the dead leaves and pupates in the ground. After a few weeks or months (we don't really know how long as yet - but we may soon know!) it emerges as an adult moth and flies off to find a mate.



The above report was sent to us by Ronald Moss aged 7. It was a report he prepared for a school project. Wonderful work Ronald!

TEACHING TIPS

The following teaching tips were provided by Katie Hiller, Mt. Glorious Biological Centre on the raising of the Orchard Swallowtail (Papilio aegeus)

Care of Butterfly Eggs:
The centre of the eggs will begin to darken before hatching. When the tiny larvae of the butterfly hatch they will first eat their eggshell and then will require new growth of Citrus spp., just tiny pieces of leaves, fresh daily if possible. You must also remove the frass daily from the container. (Frass is caterpillar droppings.)

You can keep them in a covered container (e.g. "take away" food container) for a few days, then transfer them to cut plant. It's also a good idea when the tiny larvae hatch to keep a piece of just damp tissue in the container to provide moisture. Not too much water as the tiny larvae can drown in a single drop of water.

Food
The Orchard Swallowtail feeds on Citrus leaves: Orange, Lemon, Grapefruit, Kumquat etc. It is best to cut a stem with leaves still on it and stand it in a jar. Make sure the leaves are always fresh and not dry. A new stem of leaves should be added every 2 days. (It is best to put the new stem in and leave the old to let the caterpillar move itself.)

If you touch the caterpillar, it will poke out 2 red feelers. These are called osmeteria. Smell them. Caterpillars use their osmeteria to frighten animals that might want to eat them.

Caging
We find large styro boxes (broccoli boxes with styro lids) and gladwrap taped over a cut out section in the lid provide an easy cage where the larvae are visible and the humidity is maintained for both larvae and plant cutting.

Pupation
Soon the caterpillar will stop eating and prepare to pupate. Do Not disturb or touch it now. The caterpillar will begin to spin silk and attach its tail to the stem. It will put a loop of silk around its head and hang under the stem. Then it will shed its skin for the last time and make a pupa. If you are lucky you will be able to see this happen. The pupa can be either green or brown.

Three days after the pupa is made it will be hard enough to remove carefully from the bottle or cage. Now, stick the stem of the plant into either a piece of cardboard, styrofoam, a pot full of sand or into a piece of bluetack on the wall where it will be safe from mice, cockroaches and birds.

In about 10 days – 2 weeks the pupa may change colour slightly. That means the butterfly is nearly ready to emerge.

If you have a water sprayer it is a good idea to spray the pupa as they like rain and it helps to soften the pupa for the butterfly to emerge. Your butterfly's wingspan could be 110-120cm (females could be larger) and it needs room to expand its wings so be sure the pupa is at least 10-12 cm above the ground or table.

After 2-4 hours the wings of the butterfly will be hard and dry and it will want to fly away. Gently carry it into the garden and place it on a flower in the sun.

Orchard Swallowtail

Katie Hiller
May 1998

WORLD WIDE WEB SITES TO WATCH

The site recommenced for a visit this time is one composed by Don Herbison-Evans and Stella A. Crossley entitled "Nymphalidae – Danaids, Browns, Fritillaries and Nymphs".

http://linus.socs.uts.edu.au/~don/larvae/nymp/nymphalidae.html

YOU ASKED

We have a question from John and Ronald Moss

"Ronald and I found a translucent, worm-like creature with a long, thin, extendable tail in some pond water with an algal bloom and oxygen deprived. Do you know what it is?"/**was*

The question most likely refers to the Rat-tail maggot. This is the larva of the Drone fly, a type of hoverfly, which mimics bees.

Some time ago we found one of these remarkable creatures in some very green, stagnant water. To do the creature a kindness, and to try to see what it would become, we transferred it to some fairly clean pond water with just a little algae. It didn't take to this act of benevolence on our part, and perished.

Apparently they specialize in living in thick, slushy mud, murky water or in polluted conditions and can thrive in stagnant water which has no oxygen at all. Under these conditions they eat rotten plants until fully grown. They get oxygen from the air through an extendable tube, which looks like a rat's tail which can be up to 15cm long.

According the a recent collectable series of publications, called "Bugs!", some rat-tail maggots are also known to live in the fluid at the bottom of pitcher plants, here they feed on dead insects which have fallen into the pitcher.

Helen Schwencke

**(John and Ronald also put it in some fresh water "to save its life".)*

OTHER GROUP'S ACTIVITIES

SGAP Spring Flower Show

The Society for Growing Australian Plants organizes the Annual Spring Flower Show. This is an excellent place to buy some of the more obscure butterfly host plants. SGAP Annual Spring Flower Show has a new venue this year – Mt Gravatt Showground at the corner of Logan Road and Broadwater Road on September 12 and 13.

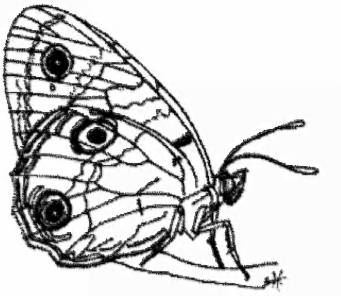
Featuring:

- Displays of native plants grown in Brisbane gardens and interstate
- Guided tours of the college gardens, which feature native plants
- Special features of grevilleas, ferns, daisies and small plants
- Sales of native plants, including plants not commonly available
- Sales of books (wide choice), cut flowers, arts and crafts
- Propagation – demonstrations and advice
- Audio-visual shows and talks on aspects related to native plants
- Plant minding service
- Displays by other organizations interested in Australian flora and fauna

Admission: Adults $2.00 – Children Free
Refreshments on sale or BYO picnic in the college grounds
Enquiries: PO Box 586, Fortitude Valley, 4006
Phone 07-5596 49

Joint B.O.I.C/Nats. Club Excursion

Bribie Island – Brisbane Exhibition Holiday, Wednesday 12th August. This joint excursion with the Q.N.C. will be at the height of the wildflower season, and Ralph O'Brien predicts a good flowering after the pre-seasonal rains. We should also find many butterfly host plants and no doubt some of the insects themselves. Most of the Sawsedge (*Gahnia sieberiana*) has recovered following severe bushfires some years ago, and we have set ourselves a dual project – to see if the northern subspecies of the Swordgrass Brown Butterfly (*Tisiphone abeona rawnsleyi)* has re-established itself after the fires, and to attempt to relocate Arrowhead Violet and the endangered Australian Fritillary Butterfly that feeds on it.



Swordgrass Brown

We will need to meet at 8 am at a site to be nominated by our leaders – please phone John Moss, 3245 2997 (after hours) for further details.

LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

Australia's Butterflies, by Peter Wilson
Butterfly Magic, by Helen Schwencke and Frank Jordan
Australian Cicadas, by Max Moulds
Butterflies of Australia, by Common and Waterhouse, 1981
Butterfly Watching, by Paul Whalley

ADS AND EXCHANGES

Sometimes you may have an oversupply of legally obtained caterpillars of non restricted species and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents'. Have **YOU** advised Rob of the host plants you have available?

Several members have reported White Nymph (*Mynes geoffroyi*) larvae on Native mulberry trees (*Pipturus argenteus*).

They have had enough larvae to give away for others to raise. I'll bet you're sorry now that you haven't given Rob MacSloy a plant list, for the Host Plant Register, so you could be contacted to raise these larvae.

NATIVE BEES

If after reading Dr. Tim Heard's article on Stingless Bees you would like further information, there is a new magazine available titled "Aussie Bee Bulletin" – a Close-Up Look at Australian Native Bees. The publishers can be contacted at – Australian Native Bee Research Centre, PO Box 74 –H, North Richmond, NSW 2754.

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

When:	Thursday, 25th June, 1998, 7.30-9.30pm
What:	"Backyard wildlife" a presentation by David Barnes
Where:	Downfall Creek Bushland Centre, Rode Road, McDowall
Contact:	Helen Schwencke, ph. 3844 6677

When:	Saturday, 18th July, 1998
What:	We will visit a new conservation reserve and see how the "Arboretum" has been developed. Then back to John's for a B.Y.O. B.B.Q. and slides at about 4.30pm.
Meet:	John Moss', 30 Melaleuca Drive, Capalaba, 1 pm
Contact:	John Moss, ph. 3245 2997 (after hours)

When:	Brisbane Exhibition Holiday, Wednesday, 12th August
What:	Bribie Island – visit wildflower areas (see Other Group's Activities elsewhere in Newsletter)
Meet:	Contact John Moss for further details

If there is a particular speaker you wish to hear or a particular event you wish to attend, it would be wise to phone the contact for that event in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

ACKNOWLEDGMENTS

Producing this newsletter is done due to the efforts of:

- Those who sent in letters and articles
- Lois Hughes who provided illustrations
- Daphne Bowden who works on layout, production and distribution
- Steve McGoldrick who works on production and layout
- Georgina John who works on editorial content and helps with design
- Helen Schwencke who developed the overall design and works on content
- Lois Hughes who developed the cover design
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.

Butterfly and Other Invertebrates Club Inc.
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Runcorn Q 4113

NEXT MEETING: Thursday, 25th June, 1998, " Backyard Wildlife" to be held at Downfall Creek Bushland Centre, Rode Road, McDowall